

3. ENVIRONMENTAL LEADERSHIP

San José's commitment to environmental sustainability and environmental justice is embodied in its 30-year legacy of progressive land use planning, environmental protection, water and energy conservation programs. Recent actions, such as development of the City's Green Vision (adopted in October 2007), the City's adoption of the Urban Environmental Accords in 2005, and incorporation of Environmental Leadership policies in this *Envision 2040 General Plan* extend that legacy.

The Green Vision outlines ten ambitious measurable goals for economic growth and environmental sustainability that are intended to be met by 2022. Green Vision goals include: supporting development of new clean technology industries; becoming more energy efficient; producing and using electricity from clean and renewable sources; building green buildings; diverting waste from landfills; and expanding the use of recycled water. The Urban Environmental Accords address seven sustainability areas, including energy, water, climate change, and solid waste, and 21 Actions that the City is in the process of implementing.

As San Jose's guide for future sustainable growth and development, this *Envision 2040 General Plan* incorporates and expands on the goals of the Green Vision, the Environmental Accords and other City policies and initiatives related to environmental sustainability. This General Plan also sets guiding policies for minimizing impacts on resources, and ensuring that the City is able to maintain the infrastructure and services necessary to sustain its economy and quality of life. To promote the implementation of these policies, this General Plan includes measurement and tracking tools to monitor the City's progress in achieving its sustainability goals.

The Environmental Leadership chapter of this Plan includes sections on measurable sustainability, environmental resources, environmental considerations/hazards, and infrastructure.

Measurable Sustainability

This section sets forth sustainability goals for San Jose through 2040, incorporating the areas of sustainability addressed in the City's Green Vision, and establishing measurable standards within this General Plan for the achievement of sustainable development practices. The intent is to use those practices to benefit the quality of life, the environment and related economic opportunities available within San Jose.

Green Building

Green Building is a whole systems approach to the design, construction, location, and operation of buildings and structures that helps to mitigate the environmental, economic, and social impacts of construction, demolition, and renovation. Green building practices recognize the relationship between the natural and built environments and seek to minimize the use of energy, water, and other natural resources and promote a healthy, productive indoor environment.

The City of San José recognizes the environmental, economic and health benefits of sustainable building practices and the benefit that being a leader in this area can provide to the development of a sustainable economy. San José is committed to the promotion of green building practices to further bring them into common use within the city and to support the development of new green building industries that lead to continued economic development.

These policies reflect the importance of maximizing use of green building practices in the design, construction, maintenance and operation of new and existing buildings. This approach will meet multiple objectives, including achievement of the energy and water conservation and efficiency performance levels that will enable the greenhouse gas reductions necessary to meet the City's goals. Successful implementation of Green Building principles requires a major industry shift toward more extensive use of whole building design and integrated design practices involving multidisciplinary teams, including end users and managers, at every stage in the design and construction process. Establishing policies and implementing those policies in a way that encourages and potentially rewards builders and designers using new or innovative techniques or equipment is also important to the success of creating economic sustainability for local clean tech industries and sustainable work and living environments within San Jose.

Goal MS-1 – Green Building Policy Leadership

Demonstrate San José's commitment to local and global Environmental Leadership through progressive use of green building policies, practices, and technologies to achieve 100 million square feet of new or retrofitted green buildings by 2040.

Policies – Green Building Policy Leadership

- MS-1.1 Continue to demonstrate leadership in the development and implementation of green building policies and practices. Ensure that all projects are consistent with or exceed the City's Green Building Ordinance and City Council Policies as well as State and/or regional policies which require that projects incorporate various green building principles into their design and construction.

- MS-1.2 Continually increase the number and proportion of buildings within San José that make use of green building practices by incorporating those practices into both new construction and retrofit of existing structures.
- MS-1.3 Continually update and strengthen the City's Green Building policies and ordinances for new construction and rehabilitation of existing buildings to provide flexibility for application of new technologies and innovative techniques that may develop in the green building field.
- MS-1.4 Foster awareness in San José's business and residential communities of the economic and environmental benefits of green building practices. Encourage design and construction of environmentally responsible commercial and residential buildings that are also operated and maintained to reduce waste, conserve water and meet other environmental objectives.
- MS-1.5 Advocate for changes to local, regional, state, or national policies and laws to further the use of green building techniques and to further the development of green building technology. Support the development and implementation of new and innovative technologies to achieve the construction of all types of environmentally high-performing buildings.
- MS-1.6 Recognize the interconnected nature of green building systems, and, in the implementation of Green Building Policies, give priority to green building options that provide environmental benefit by reducing water and/or energy use and solid waste.
- MS-1.7 Encourage retrofits for existing buildings throughout San José to use green building principles in order to mitigate the environmental, economic, and social impact of those buildings, to achieve greenhouse gas reductions, and to improve air and water quality.

Actions – Green Building Policy Leadership

- MS-1.8 Document green building new construction and retrofits as a means to show progress towards the Green Vision Goal of 50 million square feet of green buildings in San José by 2022 and 100 million square feet by 2040.
- MS-1.9 Develop programs that encourage individuals or businesses to complete green building retrofits for their properties through incentives such as tax credits, financing opportunities, or other means.
- MS-1.10 Continue to develop new and expand existing programs to educate San José's business and residential communities on the economic and environmental benefits of green building practices. Promote environmentally responsible design, construction, operation and maintenance of residential and non-residential buildings.

- MS-1.11 Provide green building technical assistance and referral service to available resources as appropriate for the public.

Goal MS-2 – Energy Conservation and Renewable Energy Use

Maximize the use of green building practices in new and existing development to maximize energy efficiency and conservation and to maximize the use of renewable energy sources.

Policies – Energy Conservation and Renewable Energy Use

- MS-2.1 Develop and maintain policies, zoning regulations, and guidelines that require energy conservation and use of renewable energy sources.
- MS-2.2 Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.
- MS-2.3 Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new construction) to minimize energy consumption.
- MS-2.4 Promote energy efficient construction industry practices.
- MS-2.5 Encourage responsible forest management in wood material selections and encourage the use of rapidly renewable materials.
- MS-2.6 Promote roofing design and surface treatments that reduce the heat island effect of new and existing development.
- MS-2.7 Encourage the installation of solar panels or other clean energy power generation sources over parking areas.

Actions – Energy Conservation and Renewable Energy Use

- MS-2.8 Develop policies which promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy demand and indirect greenhouse gas emissions, require evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in EPA's EnergyStar Program for new data centers.
- MS-2.9 Develop, implement, and utilize programs that help businesses and homeowners improve the energy efficiency of new and existing buildings.
- MS-2.10 Develop policies to encourage the use of building materials extracted and/or manufactured in California, or within 500 miles of San José.
- MS-2.11 Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques

(e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).

- MS-2.12 Update the Green Building Ordinance to require use of energy efficient plumbing fixtures and appliances that are WaterSense certified, Energy Star rated, or equivalent in new construction and renovation projects.

Goal MS-3 – Water Conservation and Quality

Maximize the use of green building practices in new and existing development to minimize use of potable water and to reduce water pollution.

Policies – Water Conservation and Quality

- MS-3.1 Require water-efficient landscaping, which conforms to the State’s Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial, and developer-installed residential development unless for recreation needs or other area functions.
- MS-3.2 Promote use of green building technology or techniques that can help reduce the depletion of the City’s potable water supply as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations..
- MS-3.3 Promote the use of drought tolerant plants and landscaping materials for non-residential and residential uses.
- MS-3.4 Promote the use of green roofs, landscape-based treatment measures, pervious materials for hardscape, and other stormwater management practices to reduce water pollution.
- MS-3.5 Minimize area dedicated to surface parking to reduce rainwater that comes into contact with pollutants.

Actions – Water Conservation and Quality

- MS-3.6 Develop and maintain policies, ordinances, and guidelines that require reduced use of potable water and that reduce water pollution.
- MS-3.7 Update the Green Building Ordinance to require installation of water efficient fixtures and appliances that are WaterSense certified, Energy Star rated, or equivalent during construction or renovation of bathrooms, kitchens, laundry areas, and/or other areas with water fixtures/appliances that are proposed to be replaced.
- MS-3.8 Continue programs to educate the community on water conserving landscaping methods and materials to discourage the use of turf when it is not required for a specific function.

- MS-3.9 Develop policies to promote water use efficiency, particularly for water-intensive activities.

Goal MS-4 – Healthy Indoor Environment

Maximize the use of green building practices in new and existing development to promote a healthy indoor environment.

Policies – Healthy Indoor Environment

- MS-4.1 Promote the use of building materials that maintain healthy indoor air quality in an effort to reduce irritation and exposure to toxins and allergens for building occupants.
- MS-4.2 Encourage construction and pre-occupancy practices to improve indoor air quality upon occupancy of the structure.

Actions – Healthy Indoor Environment

- MS-4.3 Continue to develop and implement policies and ordinances to promote the use of building materials, furniture and paint that maintain healthy indoor air quality and to discourage the use of materials that degrade indoor air quality.
- MS-4.4 Continue to develop and implement policies and ordinances to promote beneficial construction and pre-occupancy practices such as sealing of the HVAC system during construction, air flush-outs prior to occupancy, and/or air quality testing and corrections prior to occupancy.

Recycling / Zero Waste

The ultimate goal of zero waste is to contribute to achieving a greener community. To achieve San José's Zero Waste Strategy the City will maximize diversion from landfills and reduce generation of waste; provide environmental leadership and quality waste management service delivery; and ensure that the City's zero waste programs are fiscally sustainable.

Goal MS-5 – Waste Diversion

Divert 100% of waste from landfills by 2022 and maintain 100% diversion through 2040.

Policies – Waste Diversion

- MS-5.1 Encourage use of reusable products.
- MS-5.2 Assess the opportunities for implementing material bans at landfills.
- MS-5.3 Evaluate recycling collection strategies to improve marketability of cleaner materials.
- MS-5.4 Increase program participation and reduce disposal of recyclable materials through intensive outreach, incentives, enforcement or mandates.

- MS-5.5 Maximize recycling and composting from all residents, businesses, and institutions in the City.
- MS-5.6 Enhance the construction and demolition debris recycling program to increase diversion from the building sector.

Actions – Waste Diversion

- MS-5.7 Develop ordinances to target reduction of single-use carryout bags and packaging that is difficult to recycle and not compostable in local programs. Adopt and implement new technologies that enable recycling of these materials.
- MS-5.8 Revise landscaping specifications to align with state recommended guidelines that incorporate Integrated Pest Management and to support use of mulch and compost.

Goal MS-6 – Waste Reduction

Reduce generation of solid and hazardous waste.

Policies – Waste Reduction

- MS-6.1 Support programs and incentives to reduce the manufacture and use of materials that are difficult to recycle, are non-compostable substitutes for compostables, or hazardous to people and the environment.
- MS-6.2 Implement mixed-waste recycling of garbage and recycling processing residue to ensure that all recyclable and compostable materials are diverted from landfills.
- MS-6.3 Encourage the use of locally extracted, manufactured or recycled and reused materials including construction materials and compost.
- MS-6.4 Improve “downstream” reuse and recycling of end-of-life products and materials to ensure their highest and best use.
- MS-6.5 Reduce the amount of waste disposed in landfills through waste prevention, reuse, and recycling of materials at venues, facilities, and special events.
- MS-6.6 Promote the development of energy conversion technologies for converting residual wastes into energy.
- MS-6.7 Support adoption of new technologies, including collection, sorting, and processing, that can maximize waste stream materials recovery.
- MS-6.8 Maximize reuse, recycling, and composting citywide.
- MS-6.9 Collaborate and partner with other local organizations to determine effective methods to reuse or recover potentially toxic or hard-to-recycle materials.
- MS-6.10 Expand programs and facilities that accept hazardous and hard to recycle materials.

- MS-6.11 Advocate at the State level for higher disposal fees for products that are designed for single use and for products that do not incorporate any post-consumer recycled content.
- MS-6.12 Promote use of recycled materials, including reuse of existing building shells/elements, as part of new construction or renovations.

Goal MS-7 – Environmental Leadership and Innovation

Establish San José as a nationally recognized leader in reducing the amount of materials entering the solid waste stream.

Policies – Environmental Leadership and Innovation

- MS-7.1 Support zero waste legislation locally, regionally, and statewide.
- MS-7.2 Collaborate with providers of solid waste collection, recycling, and disposal services to ensure a level of service that promotes a clean environment.
- MS-7.3 Continue to support the development of green jobs through investment in zero waste programs and infrastructure.
- MS-7.4 Support the development of technologies that harness and use biogas resources from landfills and diverted organics.
- MS-7.5 Evaluate local ordinances or enforcement actions that would result in improved methane control and capture at landfills in order to reduce greenhouse gas emissions and provide an additional fuel source in the near-term.
- MS-7.6 Explore opportunities and methods to harvest buried resources from existing landfills.
- MS-7.7 Promote City operations that serve as a model for achieving zero waste.
- MS-7.8 Engage stakeholders to build consensus on zero waste programs and mandates.

Actions – Environmental Leadership and Innovation

- MS-7.9 Adopt and implement programs that reduce the amount of materials entering the waste stream.
- MS-7.10 Maintain and periodically update the Zero Waste Strategic Plan to establish criteria and strategies for achieving zero waste including reducing greenhouse gas emissions.
- MS-7.11 Develop an incentives program to grow local markets for recyclable and reusable materials, including items such as paper, compost, and construction materials.

- MS-7.12 Work with stakeholders to establish additional landfill gas-to-energy systems and waste heat recovery by 2012 and prepare an ordinance requiring such action by 2022 for San José City Council consideration.
- MS-7.13 Develop a schedule to discontinue the use of disposable, toxic or non-renewable products as outlined in the Urban Environmental Accords. City use of at least one such item shall be discontinued each year throughout the planning period. In the near-term, staff will monitor the regulation of single-use carryout bags to ensure that their use in the City is reduced by at least 50%, or shall propose enhanced regulation or an alternate product. In the mid-term, staff will evaluate all such products for regulation or for use in energy recovery processes and shall recommend such regulations as are necessary to eliminate landfilling such products in the long-term (2022-2040).
- MS-7.14 Provide on-going education about the environmental benefits of reducing wasteful consumption, which promotes the avoidance of products with excessive packaging, recycling, purchase of refills, separation of food and yard waste for composting, and using rechargeable batteries.
- MS-7.15 Develop education and promotion programs to increase recycling by occupants of multi-family buildings.

Goal MS-8 – Environmental Stewardship

Establish San José as a local, regional, and statewide model for responsible management of resources.

Policies – Environmental Stewardship

- MS-8.1 Incorporate Environmentally Preferable Procurement Policies (EP3), Environmental Management System (EMS), and Extended Producer Responsibility (EPR) principles and practices into the City operations and at City-sponsored events.
- MS-8.2 Encourage businesses in San José to adopt EP3, EMS, and EPR principles and practices and recognize those that do.
- MS-8.3 Encourage government and businesses to adopt “upstream” redesign strategies to reduce the volume and toxicity of discarded products and materials while promoting less wasteful practices.
- MS-8.4 Collaborate with neighboring jurisdictions in the near-term to evaluate and consider regional landfill bans, particularly for organic materials such as food waste and yard trimmings that contribute to methane generation in landfills.
- MS-8.5 Participate as a model city in development of the California Department of Resources Recycling and Recovery (CalRecycle) Organics Roadmap to minimize green waste disposed of in the landfill, such as compost market development, compost specification and use requirements.

- MS-8.6 Participate in the development of climate change and carbon offset protocols, plans and regulations being developed by State and other agencies, such as the California Air Resources Board and California Climate Action Registry (CCAR), to ensure that recycling, composting and anaerobic digestion are appropriately measured for their climate change impacts.
- MS-8.7 Manage wastes locally to the greatest extent feasible to minimize the export of wastes and pollution to other communities.

Action – Environmental Stewardship

- MS-8.8 Prepare for San José City Council consideration by 2012 an ordinance that would enact regional landfill bans during the near- and mid-terms for organic material such as food waste and yard trimmings that contribute to methane generation in landfills.

Goal MS-9 – Service Delivery

Operate a municipal solid waste management system that maximizes efficiencies in service delivery while protecting the environment, public health, and safety.

Policies – Service Delivery

- MS-9.1 Periodically review the industrial land supply within the City’s Urban Service Area to accommodate anticipated zero waste facility needs.
- MS-9.2 Collaborate with existing planning processes such as the Plant Master Plan to preserve industrial land and identify appropriate locations for waste management infrastructure and energy conversion facilities.
- MS-9.3 Consider General Plan and zoning changes to facilitate relocation and establishment of materials recovery and waste-to-energy industries.
- MS-9.4 Evaluate new collection and processing options, including co-collecting yard trimmings and food scraps for anaerobic digestion at the Water Pollution Control Plant.
- MS-9.5 Collaborate with outside agencies and the solid waste management industry to develop innovative processing methods for waste processing residue.
- MS-9.6 Provide convenient locations for collection of household hazardous wastes and bulk wastes.
- MS-9.7 Improve customer convenience with a broad range of collection programs and service options.
- MS-9.8 Continue to improve customer service and call center responsiveness.
- MS-9.9 Target control of litter and illegal dumping.

- MS-9.10 Provide incentives to participate in, and maximize the effectiveness of, Zero Waste program initiatives.
- MS-9.11 Strive to ensure that Zero Waste program initiatives are convenient, accessible and appropriate.
- MS-9.12 Strive to ensure that Recycle Plus services are provided equitably for all customers.

Actions – Service Delivery

- MS-9.13 Adopt standards that require new development to provide designated areas for garbage and recycling collection.
- MS-9.14 Adopt standards that ensure adequate access for solid waste collection vehicles, including: vertical clearances, vehicle turn radiuses, appropriate street widths and curb lengths for container set-outs, and street inclines.
- MS-9.15 Design and construct a centralized facility within the City that offers household hazardous waste collections, building materials re-use, and sustainability education and training.

Air Quality

Goal MS-10 – Air Pollutant Emission Reduction

Minimize air pollutant emissions from new and existing development.

Policies – Air Pollutant Emission Reduction

- MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- MS-10.2 The cumulative air quality impacts from proposed developments will be considered for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.
- MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.
- MS-10.4 The City encourages effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, the City supports Federal and State regulations to improve automobile emission controls.
- MS-10.5 In order to reduce vehicle miles traveled and traffic congestion, new development within 2,000 feet of an existing or planned transit station will be required to

encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.

- MS-10.6 Encourage mixed land use development near transit lines and provide retail and other types of service oriented uses within walking distance to minimize automobile dependent development.
- MS-10.7 Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.
- MS-10.8 Minimize vegetation removal required for fire prevention. Require alternatives to discing, such as mowing, to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.
- MS-10.9 Foster educational programs about air pollution problems and solutions.

Actions – Air Pollutant Emission Reduction

- MS-10.10 Actively enforce the City's ozone-depleting compound ordinance and supporting policy to ban the use of chlorofluorocarbon compounds (CFCs) in packaging and in building construction and remodeling. The City may consider adopting other policies or ordinances to reinforce this effort to help reduce damage to the global atmospheric ozone layer.
- MS-10.11 Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.
- MS-10.12 Increase the City's alternative fuel vehicle fleet with the co-benefit of reducing local air emissions. Implement the City's Environmentally Preferable Procurement Policy (Council Policy 4-6) and Pollution Prevention Policy (Council Policy 4-5) in a manner that reduces air emissions from municipal operations. Support policies that reduce vehicle use by City employees.
- MS-10.13 As a part of City of San José Sustainable City efforts, educate the public about air polluting household consumer products and activities that generate air pollution. Increase public awareness about the alternative products and activities that reduce air pollutant emissions.
- MS-10.14 Review and evaluate the effectiveness of site design measures, transit incentives, and new transportation technologies and encourage those that most successfully reduce air pollutant emissions.

Goal MS-11 – Toxic Air Contaminants

Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Policies – Toxic Air Contaminants

- MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.
- MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
- MS-11.3 Truck circulation routes will be reviewed for projects generating significant heavy duty truck traffic to designate truck routes that minimize exposure of sensitive receptors to TACs and particulate matter.
- MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.
- MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

- MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate matter smaller than 2.5 microns ($PM_{2.5}$) emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.
- MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.
- MS-11.8 Require signage at new projects that generate truck traffic, which reminds drivers that the State truck idling law limits truck idling to five minutes.

Goal MS-12 – Objectionable Odors

Minimize and avoid exposure of residents to objectionable odors.

Policies – Objectionable Odors

- MS-12.1 For new, expanded, or modified facilities that are potential sources of objectionable odors (such as landfills, green waste and resource recovery facilities, wastewater treatment facilities, asphalt batch plants, and food processors), the City requires an analysis of possible odor impacts and the provision of odor minimization and control measures as mitigation.
- MS-12.2 Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separate distance will be determined based upon the type, size and operations of the facility.

Goal MS-13 – Construction Air Emissions

Minimize air pollutant emissions during demolition and construction activities.

Policies – Construction Air Emissions

- MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.
- MS-13.2 Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the California Air Resources Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
- MS-13.3 Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

Actions – Construction Air Emissions

- MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.
- MS-13.5 Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- MS-13.6 Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

Energy

San José will continue to conserve energy, reduce energy consumption per capita, and adopt renewable energy technologies so that, as the City develops, its total Carbon Footprint will remain the same or be reduced. All San José residents and businesses will have expanded access to clean, renewable, affordable, and reliable energy.

Goal MS-14 – Reduce Consumption and Increase Efficiency

Reduce per capita energy consumption by at least 50% compared to 2008 levels by 2022 and maintain or reduce net aggregate energy consumption levels equivalent to the 2022 (Green Vision) level through 2040.

Policies – Reduce Consumption and Increase Efficiency

- MS-14.1 Promote job and housing growth in areas served by public transit and that have community amenities within a 20-minute walking distance.
- MS-14.2 Enhance existing neighborhoods by adding a mix of uses that facilitate biking, walking, or transit ridership through improved access to shopping, employment, community services, and gathering places.
- MS-14.3 Consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan, as revised, and when technological advances make it feasible, require all new residential and commercial construction to be designed for zero net energy use.
- MS-14.4 Implement the City's Green Building Policies (see Green Building Section) so that new construction and rehabilitation of existing buildings fully implements industry best practices, including the use of optimized energy systems, selection of materials and resources, water efficiency, sustainable site selection, passive solar building design, and planting of trees and other landscape materials to reduce energy consumption.
- MS-14.5 Consistent with State and Federal policies and best practices, require energy efficiency audits and retrofits prior to or at the same time as consideration of solar electric improvements.

Actions – Reduce Consumption and Increase Efficiency

- MS-14.6 Replace 100% of the City's traffic signals and streetlights with smart, zero emission lighting by 2022.
- MS-14.7 Measure annually the shares of the City's total Carbon Footprint resulting from energy use in the built environment, transportation, and waste management.
- MS-14.8 Partner with public, private, and non-profit agencies to develop policies that require existing residents and businesses to undertake building and appliance energy saving retrofit improvements.

Goal MS-15 – Renewable Energy

Receive 100% of electrical power from clean renewable sources (e.g., solar, wind, hydrogen) by 2022 and to the greatest degree feasible increase generation of clean, renewable energy within the City to meet its own energy consumption needs.

Policies – Renewable Energy

- MS-15.1 Promote removal of demand-side barriers to adoption of a diverse array of renewable energy and energy efficiency technologies. Demand-side barriers include:
- Cost
 - Difficulty getting small-scale products to market
 - Workforce availability
 - Lack of public awareness about the need for and availability of such products and technologies
 - State and Federal policies not supporting a diverse array of technologies
- MS-15.2 Lead globally in adopting technologies that transform solid waste and biosolids (i.e., the solids that remain after wastewater treatment) into useable energy.
- MS-15.3 Facilitate the installation of at least 100,000 solar roofs in San José by 2022 and at least 200,000 solar roofs by 2040.
- MS-15.4 Promote local innovation, research, development, and deployment of renewable energy and energy efficiency technologies.
- MS-15.5 Showcase and apply innovative technologies within San José, including developments that achieve maximum energy efficiency or net zero energy, and renewable energy systems that generate energy equal to or greater than that consumed on site.
- MS-15.6 Utilize municipal facilities to showcase the application of outstanding, innovative, and locally developed energy efficiency and renewable energy technologies and practices, to demonstrate the effectiveness of these technologies and to highlight the City's energy leadership.

Actions – Renewable Energy

- MS-15.7 Host local competitions, high profile events, conferences, and symposia to promote energy efficiency and renewable energy.
- MS-15.8 Monitor building industry and workforce needs and provide robust professional training opportunities in renewable energy technology for City employees and the public, partnering with relevant local workforce and development industry partners.
- MS-15.9 Train City code enforcement and development review staff in state-of-the-art renewable energy installations, Heating, Ventilation, and Air Conditioning (HVAC) and insulation industry standards, best practices, and resources to ensure buildings are constructed in compliance with those industry standards and best practices.

Goal MS-16 – Energy Security

Provide access to clean, renewable, and reliable energy for all San José residents and businesses.

Policies – Energy Security

- MS-16.1 Promote availability of a variety of tools and services for implementing energy conservation and renewable energy generation, including financing districts, energy auditing, and energy efficiency retrofit services to all residents and business owners.
- MS-16.2 Promote neighborhood-based distributed clean/renewable energy generation to improve local energy security and to reduce the amount of energy wasted in transmitting electricity over long distances.
- MS-16.3 Consider benefits and risks of alternative energy sources, and evaluate the City's position on alternative energy sources.

Actions – Energy Security

- MS-16.4 Partner with public, private, and non-profit agencies on public outreach and education on energy efficiency programs and services.
- MS-16.5 Establish minimum requirements for energy efficiency measures and onsite renewable energy generation capacity on all new housing developments.
- MS-16.6 Create partnerships and governance structures that improve the overall efficiency and reliability of energy production and supply.

Water Supply, Conservation, Recycling, and Quality

The City of San José in its 2040 General Plan is committed to providing a sustainable water supply to meet its goals of a healthy habitat, healthy population and healthy economy. To accomplish these goals, San José leads through example and as an advocate for the continued development of effective local, regional and statewide partnerships and governance structures that enable fiscally and environmentally sustainable water management.

Goal MS-17 – Responsible Management of Water Supply

Demonstrate environmental leadership through responsible and sustainable management of water to restore our environment, enhance our quality of life and provide an adequate water supply to meet the needs of our community now and in the future.

Policies – Responsible Management of Water Supply

- MS-17.1 Manage the limited water supply in an environmentally, fiscally, and economically sustainable manner, by working with local, regional and statewide agencies to establish policies that promote water use efficiency programs, including recycled water programs to support the expanded use of recycled water within San José and neighboring jurisdictions.
- MS-17.2 Ensure that development within San José is planned and built in a manner consistent with sustainable use of current and future water supplies by encouraging sustainable

development practices, including low-impact development, water-efficient development and green building techniques. Support the location of new development within the vicinity of the recycled water system and promote expansion of the SBWR system to areas planned for new development. Residential development outside of the Urban Service Area can be approved only at minimal levels and only allowed to use non-recycled water at urban intensities. For residential development outside of the Urban Service Area, restrict water usage to well water, rainwater collection or other similar sustainable practice. Non-residential development may use the same sources and potentially make use of recycled water, provide that its use will not result in conflicts with other General Plan policies, including geologic or habitat impacts. To maximize the efficient and environmentally beneficial use of water, outside of the Urban Service Area, limit water consumption for new development so that it does not diminish the water supply available for projected development within San Jose's urbanized areas.

- MS-17.3 Be a leader in educating the community about the challenges to the water supply system and the need for responsible water management.
- MS-17.4 Create partnerships and governance structures that allow for a comprehensive approach to water supply management that improves the reliability of local and imported water supplies, explores new sources of water, and thereby protects and enhances the Delta ecosystem.

Actions – Responsible Management of Water Supply

- MS-17.5 Partner with the Santa Clara Valley Water District and other agencies to engage the public in an outreach program about the importance of sustainable water management to San José's quality of life. Develop strategies with the public on how the City can help meet future water supply challenges and minimize the need for imported water by conserving our local water supplies and using recycled water whenever appropriate.
- MS-17.6 Quantitatively track the City's education program on the public use of water. Adjust the program as needed to meet General Plan goals.
- MS-17.7 Partner with other Bay Area cities to ensure that local, regional and statewide plans provide adequate water supplies to serve our community and protect the environment.
- MS-17.8 Review and provide input to Urban Water Management Plans prepared by water suppliers to ensure that they maximize water conservation and reuse in order to fulfill San José's water supply needs.

Goal MS-18 – Water Conservation

Continuously improve water conservation efforts in order to achieve best in class performance. Double the City's annual water conservation savings by 2040 and achieve half of the Water District's goal for Santa Clara County on an annual basis.

Policies – Water Conservation

- MS-18.1 Demonstrate environmental leadership by adopting citywide policies that encourage or require new and existing development to incorporate measures to reduce potable water demand and/or increase water efficiency in order to reduce the City's need for imported water.
- MS-18.2 Require new development outside of the City's Urban Service Area to incorporate measures to minimize water consumption.
- MS-18.3 Demonstrate environmental leadership by encouraging the creation and use of new technologies that reduce potable water demand and/or increase the efficiency of water use.
- MS-18.4 Retrofit existing development to improve water conservation.
- MS-18.5 Reduce citywide per capita water consumption by 25% by 2040 from a baseline established using the 2010 Urban Water Management Plans of water retailers in San José.
- MS-18.6 Achieve by 2040, 50 Million gallons per day of water conservation savings in San José, by reducing water use and increasing water use efficiency.
- MS-18.7 Use the 2008 Water Conservation Plan as the data source to determine San José's baseline water conservation savings level.

Actions – Water Conservation

- MS-18.8 Encourage state legislation to improve water use efficiency through statewide mandates and appropriate regulations to encourage water efficient development (for example, plumbing code, graywater code, and the green building policy)
- MS-18.9 Partner with other agencies to incentivize water conservation by developing cost-sharing agreements on rebates and other incentive programs.
- MS-18.10 Partner with other agencies on education and outreach to engage the community in an ethic of efficient water use and the use of water-efficient practices and technologies.
- MS-18.11 Adopt guidelines or ordinances that encourage or require Bay-friendly, water-efficient design, landscape and irrigation within San José.
- MS-18.12 Encourage stormwater capture and encourage, when feasible and cost-effective, on-site rainwater catchment for new and existing development.
- MS-18.13 Encourage graywater use whenever appropriate and in areas that do not impact groundwater quality as determined through coordination with local agencies.

- MS-18.14 Participate in regional efforts to develop codes and standards for stormwater capture and graywater reuse, whenever feasible and cost-effective, and in areas that do not impact groundwater quality as determined through coordination with local agencies.
- MS-18.15 Adopt city water use efficiency codes and standards and work with local, regional, state and other public and private agencies to increase water use efficiency within San José and neighboring jurisdictions.
- MS-18.16 Review and publicly report on the achievement of water conservation goals and policies on a regular basis to monitor and achieve success.
- MS-18.17 Encourage the development of new water efficiency, conservation and reuse technologies by providing opportunities for pilot testing and evaluation and incentives for early adoption of such technologies within the community.

Goal MS-19 – Water Recycling

Recycle or beneficially reuse 100% of the City's wastewater supply, including the indirect use of recycled water as part of the potable water supply.

Policies – Water Recycling

- MS-19.1 Require new development to contribute to the cost-effective expansion of the recycled water system in proportion to the extent that it receives benefit from the development of a sustainable local water supply.
- MS-19.2 Support local, regional and statewide efforts to educate the community about the benefits, reliability and quality of recycled water and the critical role it plays in our water supply.
- MS-19.3 Expand the use of recycled water to benefit the community and the environment
- MS-19.4 Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.
- MS-19.5 Improve the treatment of recycled water so that it can be used to help augment streams and recharge groundwater aquifers that provide a portion of the City's potable water supply.

Actions – Water Recycling

- MS-19.6 Develop and enact ordinance(s) that require new development to contribute to the improvement and expansion of the South Bay Water Recycling system.
- MS-19.7 Partner with the Santa Clara Valley Water District and other appropriate agencies to establish an adaptive outreach program to involve the community in development of strategies to promote the value of recycled water as an important part of a sustainable urban water use portfolio.

- MS-19.8 Initiate and support statewide laws and policies that increase the percentage of recycled water included in the State's water portfolio, encourage safe water recycling, promote community tolerance for the use of recycled water, and provide funding for regional and local recycled water projects.
- MS-19.9 Work with public and private water wholesalers and retailers to cost-effectively expand the South Bay Water Recycling distribution system to serve new non-potable water demand with emphasis placed upon areas experiencing or planned for significant amounts of new development.
- MS-19.10 Develop incentives to encourage the use of recycled water and enact ordinances that ensure that new buildings in the vicinity of the SBWR pipeline are constructed in a manner suitable for connection to the recycled water system and that they use recycled water wherever appropriate.
- MS-19.11 Provide technical assistance to industries and community businesses to facilitate the use of recycled water. Support recycled water research to increase understanding of all safe and viable uses for recycled water in our community.
- MS-19.12 Adopt city recycled water use codes and standards and work with local, regional, state and other public and private agencies to substantially increase use of recycled water within San José and neighboring jurisdictions.
- MS-19.13 Review and publicly report on the achievement of water recycling goals and policies on a regular basis to monitor and achieve success.

Goal MS-20 – Water Quality

Ensure that all water in San José is of the highest quality appropriate for its intended use.

Policies – Water Quality

- MS-20.1 Lead through advocacy with local, regional and state agencies to ensure the protection and enhancement of the quality of San José's water sources.
- MS-20.2 Avoid locating new development or authorizing activities with the potential to negatively impact groundwater quality in areas that have been identified as having a high degree of aquifer vulnerability by the Santa Clara Valley Water District or other authoritative public agency.
- MS-20.3 Protect groundwater as a water supply source through flood protection measures and the use of stormwater infiltration practices that protect groundwater quality. In the event percolation facilities are modified for infrastructure projects, replacement percolation capacity will be provided.

Action – Water Quality

MS-20.4 Work with local, regional and state agencies to protect and enhance the watershed, including the protection of surface water and ground water supplies from pollution and degradation.

Community Forest

San José's Community Forest consists of trees growing on public property, such as street right-of-ways, parks, community centers, libraries and schools; and trees growing on private property, including trees in the backyards of homes, shopping center parking lots, and within the landscaped areas of high-technology office buildings. The Community Forest provides scenic beauty, serves as a barrier to wind and as a visual buffer, and provides shade to reduce heat in urban areas. It also filters pollutants from the air, helps conserve energy and water use, replenishes oxygen, and protects against flood hazards, landslides, and soil erosion by absorbing rain water. Native and landscape trees within this Forest provides important wildlife habitat for birds and other animals living in urban areas. All large specimen and heritage trees, especially native oaks, have special aesthetic and historical values. Street trees promote neighborhood traffic safety by encouraging motorists to drive more slowly. San José's Community Forest softens the effects of urban development, raises neighborhood and commercial property values, and contributes to the community's identity and sense of place.

Goal MS-21 – Community Forest

Preserve and protect existing trees and increase plantings of new trees within San Jose to create and maintain a thriving Community Forest that contributes to the City's quality of life, its sense of community and its economic and environmental well being.

Policies – Community Forest

- MS-21.1 Manage the Community Forest to achieve San José's environmental goals for water and energy conservation, wildlife habitat preservation, stormwater retention, heat reduction in urban areas, energy conservation, and the removal of carbon dioxide from the atmosphere.
- MS-21.2 Provide appropriate resources to preserve, protect and expand the City's Community Forest.
- MS-21.3 Ensure that San José's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest.
- MS-21.4 Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to effectively preserve it.

- MS-21.5 As part of the development review process, preserve protected trees (as defined by the Municipal Code), and other significant trees. Avoid any adverse affect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
- MS-21.6 As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.
- MS-21.7 Manage infrastructure to ensure that the placement and maintenance of street trees, streetlights, signs and other infrastructure assets are integrated. Give priority to tree placement in designing or modifying streets.
- MS-21.8 For Capital Improvement Plan or other public development projects, or through the entitlement process for private development projects, require landscaping including the planting of new trees to achieve the following goals:
1. Avoid conflicts with nearby power lines.
 2. Avoid potential conflicts between tree roots and developed areas.
 3. Avoid use of invasive, non-native trees.
 4. Remove existing invasive, non-native trees.
 5. Incorporate native trees into urban plantings in order to provide food and cover for native wildlife species.
 6. Plant native oak trees and native sycamores on sites which have adequately sized landscape areas and which historically supported these species.
- MS-21.9 Where urban development occurs adjacent to natural plant communities (e.g., oak woodland, riparian forest), landscape plantings shall incorporate tree species native to the area and propagated from local sources (generally from within 5-10 miles and preferably from within the same watershed).
- MS-21.10 Prohibit London plane trees from being planted in the Coyote Planning Area, which is located near the most significant stands of sycamore alluvial woodland in the City. Planting of this species is discouraged elsewhere, particularly near riparian areas. Prohibit holly-leaved oaks from being planted in areas containing stands of native oaks or in proximity to native oak woodland habitat.

Actions – Community Forest

- MS-21.11 Create and maintain an inventory of the City’s street and park trees.
- MS-21.12 Complete the development of a Community Forest Master Plan that provides a strategy to achieve the City’s Community Forest Goals; implement this Master Plan.

- MS-21.13 Develop performance measures for tree planting and canopy coverage which measure the City's success in achieving the Community Forest goals. These performance measures should inform tree planting goals for the years between 2022 (the horizon year for the Green Vision) and 2040.
- MS-21.14 Secure adequate human and financial resources to oversee all City tree services, to implement policies and to address the deferred and on-going maintenance funding needs for the community forest.
- MS-21.15 Expand the City's existing partnership with Our City Forest, and develop new partnerships with other non-profits, businesses, other agencies and the community, to maximize available resources to maintain and expand the Community Forest.
- MS-21.16 Collaborate with other government agencies – local, state and federal – to leverage resources to achieve the City's Community Forest goal.
- MS-21.17 Continue to support volunteer urban forestry programs that encourage the participation of citizens in tree planting and maintenance in neighborhoods and parks throughout the City.
- MS-21.18 Continue to implement the Heritage Tree Ordinance to maintain and protect San José's heritage trees.
- MS-21.19 Periodically update the heritage tree list, identifying trees of special significance to the community.
- MS-21.20 Explore development of a user-friendly, city managed in-lieu fee/tree planting program that provides applicants with an alternative way to provide required replacement trees.

Environmental Resources

San Jose boasts a plethora of environmental resources across its diverse landscape. San Jose celebrates its natural setting, including its hillsides, riparian corridors, lakes, the San Francisco Bay, and adjacent baylands. The goals and policies in this section protect San Jose's terrestrial and aquatic assets, as well as the flora and fauna these natural resources support. They also recognize the importance of San Jose's archaeological and extractive resources.

Natural Communities and Wildlife Habitat

The Natural Communities and Wildlife Habitat goals and policies provide guidance for how to balance resource conservation and urban development, so as to maximize the mutual achievement of environmental, economic and social objectives.

San José also recognizes the need for multiple jurisdictions to cooperate in the management of natural communities and wildlife habitat. Recognizing this interdependence, San José will

demonstrate environmental leadership through advocacy and cooperative efforts with other jurisdictions.

Goal ER-1 – Balanced Resource Conservation

Balance resource conservation and urban development within the Greenline/Urban Growth Boundary to maximize achievement of environmental, economic and social objectives.

Policy – Balanced Resource Conservation

ER-1.1 Continue to maintain the Greenline/Urban Growth Boundary and focus development and redevelopment within the existing urban envelope of the City.

Grassland, Oak Woodlands, Chaparral and Coastal Scrub Habitats

Oak woodlands, grasslands, chaparral and coastal scrub are the primary vegetative cover on the hillsides surrounding the Santa Clara Valley floor. In addition to providing grazing land, wildlife habitat, and rainwater capture, these areas also have direct scenic value.

Goal ER-2 – Grassland, Oak Woodlands, Chaparral and Coastal Scrub

Preserve, protect and restore the ecological integrity and scenic characteristics of grasslands, oak woodlands, chaparral and coastal scrub in hillside areas. (SJ2020 GP Updated)

Policies – Grassland, Oak Woodlands, Chaparral and Coastal Scrub

- ER-2.1 The nature and amount of public access to wooded areas, scrublands, and grasslands, when allowed, shall be consistent with the environmental characteristics of these areas.
- ER-2.2 Prohibit the use of motorized off-road vehicles for recreation purposes in oak woodland, grassland, and hillside areas within the City to protect these limited resources.
- ER-2.3 Cooperate with other agencies in the preservation and management of native hillside vegetation.
- ER-2.4 Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodland, chaparral, and coastal scrub during development and grading for projects within the City.
- ER-2.5 Preserve and protect oak woodlands, and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.
- ER-2.6 Discourage agricultural practices, other than managed grazing of grasslands, in hillside areas.

- ER-2.7 Preserve, protect, and manage serpentine grasslands and serpentine chaparral, particularly those supporting sensitive serpentine bunchgrass communities providing habitat for sensitive plant and animal species. Development will not be permitted on serpentine grasslands or chaparral supporting state or federal candidate or listed threatened or endangered plant or animal species. Appropriately managed grazing is encouraged on serpentine grasslands.
- ER-2.8 Prohibit planting of invasive non-native plant species in oak woodlands, grasslands, chaparral and coastal scrub habitats, and in hillside areas.

Action – Grassland, Oak Woodlands, Chaparral and Coastal Scrub

- ER-2.9 Continue to work with Local Partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of Gilroy and Morgan Hill) and three Wildlife Agencies (the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service (NMFS-NOAA Fisheries)) on completion of the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) project. Once completed and adopted, implement an HCP/NCCP that both mitigates for land and stream development impacts and provides additional conservation, restoration, and enhancement efforts.
- ER-2.10 In the event an HCP/NCCP which includes measures to off-set indirect impacts to serpentine grassland habitats is not adopted, as City resources allow, develop and implement a comparable City of San Jose program for preservation of serpentine grasslands based upon the strategies developed through the HCP/NCCP process.

Riparian Corridors

Streams and adjacent riparian lands within the City of San José are a vital natural resource supporting a diversity of habitats. They also provide open space resources and contribute to economic vitality.

Goal ER-3 – Riparian Corridors

Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.

Policies – Riparian Corridors

- ER-3.1 Ensure that new public and private development adjacent to riparian corridors in San José are consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).
- ER-3.2 Ensure that a 100-foot setback from riparian habitat is the standard to be achieved in all but a limited number of instances, only where no significant environmental impacts would occur.

- ER-3.3 Design new development to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise and toxic substances into the riparian zone.
- ER-3.4 When disturbances to riparian corridors cannot be avoided, implement appropriate measures to restore, and/or mitigate damage and allow for fish passage during construction.
- ER-3.5 Restore riparian habitat through native plant restoration and removal of non-native/invasive plants along riparian corridors and adjacent areas.

Actions – Riparian Corridors

- ER-3.6 Develop a City Council Policy based on the City's Riparian Corridor Policy Study and HCP/NCCP to successfully implement the riparian goals and policies of this General Plan, which recognizes that a 100-foot setback is the standard to be achieved in all but a limited number of instances, where no significant environmental impacts would occur.
- ER-3.7 Partner with public, private, and non-profit agencies on public outreach and education on the importance of protecting our riparian corridor resources.
- ER-3.8 Develop and require the use of a criteria checklist from the Riparian Corridor Policy Study to evaluate new developments that propose to use riparian setback exceptions.

Bay and Baylands

The San Francisco Bay and the baylands are a vital biotic, cultural and recreational open space resource.

Goal ER-4 – Bay and Baylands

Preserve and restore natural characteristics of the Bay and adjacent lands, and recognize the role of the Bay's vegetation and waters in maintaining a healthy regional ecosystem.

Policies – Bay and Baylands

- ER-4.1 The baylands ecosystem shall be protected, preserved and restored in a manner consistent with the fragile environmental characteristics of this area and the interest of the citizens of San José in a healthful environment.
- ER-4.2 Cooperate with the County, U.S. Army Corps of Engineers, EPA, California Department of Fish and Game, Bay Conservation and Development Commission (BCDC), and other appropriate jurisdictions to prevent the degradation of baylands by discouraging new filling or dredging of Bay waters and baylands.
- ER-4.3 In cooperation and, where appropriate, in consultation with other interested agencies and with projects such as the South Bay Salt Ponds Restoration Project, encourage the restoration of diked historic wetlands, including salt ponds, to their natural state by opening them to tidal action.

ER-4.4 Avoid new development which creates substantial adverse impacts on the Don Edwards San Francisco Bay National Wildlife Refuge or results in a net loss of baylands habitat value.

ER-4.5 Prohibit planting of invasive non-native plant species in or near baylands habitats.

Special-Status Plants and Animals

Natural habitats and communities, including streams, oak woodlands, grassland, chaparral, riparian forest, salt marsh, freshwater wetlands, and others, harbor a number of species that are rare, declining, or particularly sensitive to human activities. These "special-status species" include plants and animals that are protected under State and Federal Endangered Species Acts, the Federal Migratory Bird Treaty Act, and the California Fish and Game Code, and other species listed by the California Department of Fish and Game and the California Native Plant Society. (See Table 1 Special-Status Animal Species)

Goal ER-5 – Special-Status Plants and Animals

Preserve, manage, and restore habitat suitable for special-status species, including threatened and endangered species.

Policies – Special Status Plants and Animals

ER-5.1 Preserve and restore habitat areas that support special-status species. Avoid development in such habitats unless no feasible alternatives exist and mitigation is provided of equivalent value.

ER-5.2 Limit recreational uses in wildlife refuges, nature preserves and wilderness areas in parks to those activities which have minimal impact on sensitive habitats.

ER-5.3 Prohibit planting of invasive non-native plant species in natural habitats that support special-status species.

ER-5.4 Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species.

Table 1: Special-status Species in San José's Sphere of Influence	
Common Name	Scientific Name
Tiburon Indian paintbrush	<i>Castilleja affinis ssp. neglecta</i>
Coyote ceanothus	<i>Ceanothus ferrisiae</i>
Santa Clara Valley dudleya	<i>Dudleya setchellii</i>
Metcalf Canyon jewel-flower	<i>Streptanthus albidus ssp. albidus</i>
Alkali milk-vetch	<i>Astragalus tener var. tener</i>
Big-scale balsamroot	<i>Balsamorhiza macrolepis var. macrolepis</i>
Congdon's tarplant	<i>Centromadia parryi ssp. congdonii</i>
Mt. Hamilton thistle	<i>Cirsium fontinale var. campylon</i>
Hoover's button-celery	<i>Eryngium aristulatum var. hooveri</i>
Fragrant fritillary	<i>Fritillaria liliacea</i>
Loma Prieta hoita	<i>Hoita strobilina</i>
Satan's goldenbush	<i>Isocoma menziesii var. diabolica</i>
Smooth lessingia	<i>Lessingia micradenia var. globrata</i>
Arcuate bush-mallow	<i>Malacothamnus arcuatus</i>
Mt. Diablo cottonweed	<i>Micropus amphibolus</i>
Robust monardella	<i>Monardella villosa ssp. globosa</i>
Most beautiful jewel-flower	<i>Streptanthus albidus ssp. peramoenus</i>
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>
Pacific lamprey	<i>Lampetra tridentata</i>
Central Valley fall-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Central California coast steelhead	<i>Oncorhynchus mykiss</i>
California tiger salamander	<i>Ambystoma californiense</i>
California red-legged frog	<i>Rana draytonii</i>
Foothill yellow-legged frog	<i>Rana boylei</i>
Western pond turtle	<i>Actinemys marmorata</i>
California brown pelican	<i>Pelecanus occidentalis</i>
Golden eagle	<i>Aquila chrysaetos</i>
White-tailed kite	<i>Elanus caeruleus</i>
Northern Harrier	<i>Circus cyaneus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
American peregrine falcon	<i>Falco peregrinus anatum</i>
California clapper rail	<i>Rallus longirostris obsoletus</i>
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>
California least tern	<i>Sterna antillarum browni</i>
Burrowing owl	<i>Athene cunicularia</i>
Vaux's swift	<i>Chaetura vauxi</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Yellow warbler	<i>Dendroica petechia</i>
San Francisco common yellowthroat	<i>Geothlypis trichas sinuosa</i>
Alameda song sparrow	<i>Melospiza melodia pusillula</i>
Grasshopper sparrow	<i>Ammodramus savannarum</i>
Bryant's savannah sparrow	<i>Passerculus sandwichensis alaudinus</i>
Tricolored blackbird	<i>Agelaius tricolor</i>
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>
Salt marsh wandering shrew	<i>Sorex vagrans halicoetes</i>
Pallid bat	<i>Antrozous pallidus</i>
Western red bat	<i>Lasiurus blossevillei</i>
San Francisco dusky-footed woodrat	<i>Neotoma fuscipes annectens</i>
American badger	<i>Taxidea taxus</i>

Migratory Birds

More than 350 species of birds have been observed in the diverse array of habitats provided by the City.

Goal ER-6 – Migratory Birds

Protect migratory birds from injury or mortality.

Policies – Migratory Birds

- ER-6.1 Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
- ER-6.2 Require that development projects incorporate measures to avoid impacts to nesting migratory birds.

Urban Natural Interface

Goal ER-7 – Urban Natural Interface

Minimize adverse effects of urbanization on natural lands surrounding the City's developed areas.

Policies – Urban Natural Interface

- ER-7.1 Encourage fencing between residential areas and natural lands to minimize the encroachment of people, pets, and non-native vegetation into natural lands.
- ER-7.2 Design Development at the urban/natural community interface of the Greenline/Urban Growth Boundary (UGB) to minimize the length of the shared boundary between urban development and natural areas through clustering of development and locating development closest to existing development. Key areas where natural communities are found adjacent to the UGB include the Baylands in Alviso, the Santa Teresa Hills, Alum Rock Park, and Evergreen.
- ER-7.3 Lighting in developed areas adjacent to natural areas will consist of low-glare lighting. Any high-intensity lighting used near natural areas will be placed as close to the ground as possible and directed downward or away from natural areas.
- ER-7.4 Public facilities such as ballparks and fields that require high-intensity night lighting will be sited at least 0.5 mile from sensitive habitats to minimize light pollution, unless it can be demonstrated that lighting systems will not substantially increase lighting within natural areas (e.g., due to screening topography or vegetation).
- ER-7.5 Prohibit use of invasive species, citywide, in required landscaping as part of the discretionary review of proposed development.

- ER-7.6 Encourage the use of native plants in the landscaping of developed areas adjacent to natural lands.
- ER-7.7 Include barriers to animal movement within new development and, when possible, within existing development, to prevent movement of animals (e.g., pets and wildlife) between developed areas and natural habitat areas where such barriers will help to protect sensitive species.
- ER-7.8 Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.

Action – Urban Natural Interface

- ER-7.9 Work with landowners, landscapers, nurseries, and the multi-agency Santa Clara County Weed Management Area to remove and prevent the spread of highly invasive and noxious weeds. Invasive plants are those plants listed in the State’s Noxious Weed List, the California Invasive Plant Council’s list of “Exotic Pest Plants of Greatest Ecological Concern in California,” and other priority species identified by the agricultural commissioner and California Department of Agriculture.

Wildlife Movement

Wildlife movement within or in the vicinity of San José takes many forms, and is different for the various species associated with these lands. Bird and bat species move readily over the landscape, foraging over and within both natural lands and landscaped areas of the City. Fish species move along the stream corridors, some as year-round residents, some as anadromous species that live in salt water and spawn in fresh water. Mammals of different species move within their home ranges, but also disperse between patches of high-quality habitat.

Movement of animals between the vast expanses of natural lands in the Santa Cruz Mountains and the Diablo Range is constrained by development that has occurred on the Santa Clara Valley floor. Consequently, it is important that wildlife be able to move between these two mountain ranges in the few areas where such movement still occurs. Within the City’s Sphere of Influence, the Coyote Valley and Almaden Valley still provides a landscape linkage between these two ranges. On-going acquisition and preservation of strategic lands by either public agencies or non-profits can further promote beneficial connectivity between wildlife habitat areas.

Goal ER-8 – Wildlife Movement

Minimize adverse effects of future development on wildlife movement and remove or reduce existing impediments to wildlife movement.

Policies – Wildlife Movement

- ER-8.1 In the area north of Highway 237 design and construct buildings and structures to reduce the potential for bird strikes for species associated with the baylands or the riparian habitats of lower Coyote Creek.

- ER-8.2 In areas important to terrestrial wildlife movement, design new or improved existing roads so that they allow wildlife to continue to move across them (e.g., either over the road surface or through undercrossings or overcrossings designed for the animals moving through the areas). Enhance undercrossings used for wildlife movement (e.g., by enlargement) when roads are improved.
- ER-8.3 Where new road crossings of streams are constructed, or existing culverts are replaced or improved, design them to allow movement of aquatic species present in any watercourse crossed by the road. Use clear-span bridges in place of culverts where feasible.

Action – Wildlife Movement

- ER-8.4 To facilitate the movement of wildlife across Coyote Valley, work with the appropriate transportation agencies to replace portions of the median barrier on Monterey Road with a barrier that maintains human safety while being more permeable to wildlife movement and implement other improvements to benefit wildlife movement.
- ER-8.5 Support the on-going identification and protection of critical linkages for wildlife movement in the Mid-Coyote Valley.

Stormwater

The City of San José is committed to responsible stormwater management to support healthy habitats, a healthy human population, and a healthy economy. To accomplish these goals, San José continues to implement policies and programs that manage its discharge into the City's storm drain system to enhance the quality of local waterways.

Goal ER-9 - Stormwater

Minimize the adverse effects on ground and surface water quality and protect property and natural resources from stormwater runoff generated in the City of San José.

Policies - Stormwater

- ER-9.1 Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff (6-29) and Hydromodification Management (8-14) Policies.
- ER-9.2 Coordinate with regional and local agencies and private landowners to plan, finance, construct, and maintain regional stormwater management facilities.
- ER-9.3 Ensure that private development in San José includes adequate measures to treat stormwater runoff.
- ER-9.4 Assess the potential for surface water and groundwater contamination and require appropriate preventative measures when new development is proposed in areas where storm runoff will be directed into creeks upstream from groundwater recharge facilities.

- ER-9.5 Ensure that all development projects in San José maximize opportunities to filter, infiltrate, store and reuse or evaporate stormwater runoff onsite.
- ER-9.6 Eliminate barriers to and enact policies in support of the reuse of stormwater runoff for beneficial uses in existing infrastructure and future development in San José.
- ER-9.7 Encourage stormwater reuse for beneficial uses in existing infrastructure and future development through the installation of rain barrels, cisterns, or other water storage and reuse facilities.
- ER-9.8 Consider the characteristics and condition of the local watershed and identify opportunities for water quality improvement when developing new or updating existing development plans or policies including, but not limited to, specific or area land use plans.

Actions - Stormwater

- ER-9.9 Partner with public, private, and non-profit agencies on public outreach and education on the importance of responsible stormwater management.
- ER-9.10 Continue to participate in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SVURPPP) and take other necessary actions to formulate and meet regional water quality standards which are implemented through the National Pollution Discharge Elimination System (NPDES) permits and other measures.

Water

The local water resource system consists of watershed lands, underground aquifers, groundwater recharge areas, recycled water, reservoirs, canals, streams, rivers, creeks, and the riparian vegetations associated with them. This local system is supplemented by the importation of water from external sources. Water is imported to Santa Clara County by the Santa Clara Valley Water District (SCVWD) from state and federal water systems that flow through the Sacramento-San Joaquin Delta, and by the San Francisco Public Utilities Commission (SFPUC) from the Sierra Nevada mountain range.

Goal ER-10 – Water

Protect water resources because they are vital to the ecological and economic health of the region and its residents.

Policies – Water

- ER-10.1 In Consultation with the Santa Clara Valley Water District, other public agencies and the SCVWDs Water Resources Protection Guidelines and Standards (2006 or as amended), restrict or carefully regulate public and private development in streamside areas so as to protect and preserve the health, function and stability of streams and stream corridors.

- ER-10.2 In Consultation with the SCVWD restrict or carefully regulate public and private development in upland areas to prevent uncontrolled runoff that could impact the health and stability of streams.
- ER-10.3 Utilize water resources in a manner that does not deplete the supply of surface or groundwater or cause overdrafting of the underground water basin.
- ER-10.4 Work with the SCVWD to preserve water quality by establishing appropriate public access and recreational uses on land adjacent to rivers, creeks, wetlands, and other significant water courses.
- ER-10.5 Protect groundwater recharge areas, particularly creeks and riparian corridors.
- ER-10.6 Require the proper construction and monitoring of facilities that store hazardous materials in order to prevent contamination of the surface water, groundwater and underlying aquifers. In furtherance of this policy, design standards for such facilities should consider high groundwater tables and/or the potential for freshwater or tidal flooding.

Archaeology and Paleontology

San José's long and colorful human and natural history provides a significant contribution to a sense of community identity. Native Americans represent a large part of that history, and artifacts from the Native American era and fossils of plants and animals have been discovered in various locations throughout San José. These artifacts provide an irreplaceable record of another civilization and the history of life on earth, so their protection is important.

Goal ER-11 – Archaeology and Paleontology

Preserve and conserve archaeologically significant structures, sites, districts and artifacts in order to promote a greater sense of historic awareness and community identity.

Policies – Archaeology and Paleontology

- ER-11.1 For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
- ER-11.2 Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon their discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.

- ER-11.3 Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

Action – Archaeology and Paleontology

- ER-11.4 The City will maintain a file of archaeological and paleontological survey reports by location to make such information retrievable for research purposes over time.

Extractive Resources

Extractive resources known to exist in and near the Santa Clara Valley include cement, sand, gravel, crushed rock, clay, and limestone. All of these have provided building materials to the construction industry. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century.

Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated: the Communications Hill Area (Sector EE), bounded generally by the Southern Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue, as containing mineral deposits which are of regional significance as a source of construction aggregate materials. Neither the State Geologist nor the State Mining and Geology Board has classified any other areas in San José as containing mineral deposits which are either of statewide significance or the significance of which requires further evaluation. Therefore, other than the Communications Hill area cited above, San José does not have mineral deposits subject to SMARA.

Goal ER-12 – Extractive Resources

Conserve and make prudent use of commercially usable extractive resources.

Policies – Extractive Resources

- ER-12.1 When urban development is proposed on lands which have been identified as containing commercially usable extractive resources, consider the value of those resources.
- ER-12.2 Encourage the conservation and development of SMARA-designated mineral deposits wherever economically feasible.
- ER-12.3 When making land use decisions involving areas which have a SMARA designation of regional significance, balance mineral values against alternative land uses and consider the importance of these minerals to their market region as a whole and not just their importance to San José.
- ER-12.4 Carefully regulate the quarrying of commercially usable resources, including sand and gravel, to mitigate potential environmental effects such as dust, noise and erosion.

- ER-12.5 When approving quarrying operations, require the preparation and implementation of reclamation plans for the contouring and revegetation of sites after quarrying activities cease.

Environmental Considerations / Hazards

San José's Sphere of Influence includes many areas subject to varying degrees of naturally occurring hazards. Historically, as land becomes scarce, there is increased pressure to develop vacant land with a higher hazard potential. Development in hazardous areas, however, can result in significant costs to the community, including major property damage as well as potential loss of life. Another major consideration is the extraordinary expense borne by the City to repair and replace public utilities and facilities located in hazard areas.

Hazards obviously represent a risk to the community. The purpose of the goals and policies in this section is to incorporate safety considerations into the City's planning and decision-making processes to reduce those risks. Since it is not possible to eliminate all such risks, the City and its residents must decide, based on personal, social, and economic costs and benefits, the degree of risk that is acceptable for various hazards. High risks in existing structures may be lowered to an acceptable level by physical alteration, relocation, demolition or changes in use. For new development, the emphasis of the General Plan policies is to regulate construction so as to minimize identifiable risks.

The Natural Hazards policies in this Plan are based on substantial background data and analysis about existing conditions in the City of San José and in the Santa Clara Valley. The main sources for this information, incorporated into this General Plan by reference, are:

1. "Technical Report, Geological Investigation, City of San José's Sphere of Influence", prepared by Cooper-Clark and Associates, hereinafter called the Cooper-Clark Technical Studies.
2. The City of San José Fault Hazard Maps, prepared by the San José Department of Public Works, which include State of California Special Study Zones.
3. Digital Flood Insurance Rate Maps (DFIRM), City of San José, California, prepared for the National Flood Insurance Program by the Federal Emergency Management Agency.
4. Flood Awareness Maps for Santa Clara County, prepared by the California Department of Water Resources.
5. Anderson Dam EAP 2003 Flood Inundation Maps, prepared by the SCVWD.
6. The City of San José Special Flood Hazard Area Regulations (San José Municipal Code Section 17.08).
7. "Flooding in San José, Study Session on Flood Management Issues November 19, 2007", prepared by the San José City Council and SCVWD Board of Directors.
8. The City of San José Geologic Hazard Regulations (San José Municipal Code Section 17.10).
9. City of San José Emergency Operations Plan, August 17, 2004.
10. SCVWD Water Resources Protection Guidelines and Standards (2006 or as amended), prepared collaboratively by SCVWD, the City of San José and other local jurisdictions.

11. Association of Bay Area Governments (ABAG) Hazard Mitigation Plan "Taming Natural Disasters", adopted per Council Resolution No. 73721 as the City of San José's local hazard mitigation plan.

These sources describe the soils, geologic and flooding conditions throughout the area, but they are not intended to identify the site specific characteristics of individual properties. For instance, flood maps are a guide created for insurance purposes and represent a condition at a snapshot in time. The frequency, depth and lateral extent of flooding is influenced by land development, land subsidence, and global warming or other climatic changes. This Plan's policies require detailed site-specific evaluation of properties when the sources referenced above indicate there may be a potential hazard. This evaluation is to confirm the accuracy of the generalized information provided in the referenced sources, identifying the specific impacts of a proposed development, and developing appropriate mitigation measures for those impacts.

There are many interrelationships between the various topics within the Hazards section of this Plan. For example, the control of erosion and prevention of landslides can have positive effects on the reduction of potential flooding impacts. Earthquakes can magnify, and in fact are a direct cause of one type of liquefaction, a hazardous soil condition. Fires in watershed areas can increase erosion and storm water runoff, thereby increasing flooding potential.

This discussion of natural hazards also relates to other elements of the General Plan. The potential for land subsidence is directly related to the issues discussed in the Water Resources section, since land subsidence is caused from overdrafting the groundwater basin. The discussion of flooding hazards in this section is directly related to the planning for improved flood protection facilities discussed in the Facilities and Services section. This section also addresses manmade hazards, including noise, fire hazards and hazardous materials. Safety hazards associated with vehicular, rail and air transportation are addressed in the Transportation goals and policies.

In the event of a fire, geologic, or other hazardous occurrence, the City of San José's Emergency Plan provides comprehensive, detailed instructions and procedures regarding the responsibilities of City personnel and coordination with other agencies to ensure the safety of San José's citizens. That Emergency Plan includes evacuation procedures but does not delineate evacuation routes. Instead, procedures are outlined for different types of emergencies occurring in different locations of San José.

Noise and Vibration

Goal EC-1 – Community Noise Levels and Land Use Compatibility

Minimize the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies.

Policies – Community Noise Levels and Land Use Compatibility

EC-1.1 Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review. Applicable standards and guidelines for land uses in San José include:

Interior Noise Levels

- The City's standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL. Include appropriate site and building design, building construction and noise attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected General Plan traffic volumes to ensure land use compatibility and General Plan consistency over the life of this plan.

Exterior Noise Levels

- The City's acceptable exterior noise level objective is 60 dBA DNL or less for residential and most institutional land uses (Table EC-1). The acceptable exterior noise level objective is established for the City, except in the environs of the San José International Airport, the Downtown Core Area, and along major roadways. For the remaining areas of the City, the following standards apply:
 - For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 60 dBA DNL in usable outdoor activity areas, excluding balconies and residential stoops and porches facing existing roadways. There will be common use areas available to all residents that meet the 60 dBA exterior standard. Use noise attenuation techniques such as shielding by buildings and structures for outdoor common use areas.
 - For single family residential uses, use a standard of 60 dBA DNL for exterior noise in private usable outdoor activity areas, such as backyards.

Table EC-1: Land Use Compatibility Guidelines for Community Noise in San José						
Land Use Category	Exterior Noise Exposure (DNL in Decibels (dBA))					
	55	60	65	70	75	80
1. Residential, Hotels and Motels, Hospitals and Residential Care ¹						
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
3. Schools, Libraries, Museums, Meeting Halls, Churches						
4. Office Buildings, Business Commercial, and Professional Offices						
5. Sports Arena, Outdoor Spectator Sports						
6. Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters						
¹ Noise mitigation to reduce interior noise levels pursuant to Policy NV-1.1 is required. <div> <div></div> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. </div> <div> <div></div> Conditionally Acceptable: Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design. </div> <div> <div></div> Unacceptable: New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Development will only be considered when technically feasible mitigation is identified that is also compatible with relevant design guidelines. </div>						

- EC-1.2 Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:
- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain “Normally Acceptable”; or
 - Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the “Normally Acceptable” level.
- EC-1.3 New nonresidential land uses will mitigate noise generation to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.
- EC-1.4 Include appropriate noise attenuation techniques in the design of all new arterial streets projected to adversely impact noise sensitive uses.
- EC-1.5 The City will encourage the State Department of Transportation and County transportation agencies to provide visually pleasing sound attenuation devices on all new and existing freeways and expressways.

- EC-1.6 Continue to regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.
- EC-1.7 Construction operations within San Jose will be required to use best available noise suppression devices and techniques and continue to limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:
- Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.
- For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.
- EC-1.8 Commercial drive-through uses will be allowed only when consistency with the City's exterior noise level guidelines and compatibility with adjacent land uses can be demonstrated.
- EC-1.9 Noise studies are required for land use proposals where known or suspected loud intermittent noise sources occur which may impact adjacent existing or planned land uses. For new residential development affected by noise from heavy rail, light rail, BART or other single-event noise sources, mitigation will be implemented so that recurring maximum instantaneous noise levels do not exceed 50 dBA L_{\max} in bedrooms and 55 dBA L_{\max} in other rooms.
- EC-1.10 The City should monitor Federal legislative and administrative activity pertaining to aircraft noise for new possibilities for noise-reducing modifications to aircraft engines beyond existing Stage 3 requirements.. The City should continue to encourage the use of quieter aircraft at the San José International Airport.
- EC-1.11 Continue to require safe and compatible land uses within the Mineta International Airport noise zone (defined by the 65 CNEL contour as set forth in State law) and encourage aircraft operating procedures that minimize noise.
- EC-1.12 Continue to encourage the Federal Aviation Administration to enforce current cruise altitudes that minimize the impact of aircraft noise on land use.

Action – Community Noise Levels and Land Use Compatibility

- EC-1.13 Update noise limits and acoustical descriptors in the Zoning Code to clarify noise standards that apply to land uses throughout the City.
- EC-1.14 Require acoustical analyses for proposed sensitive land uses in areas with exterior noise levels exceeding the City's noise and land use compatibility standards to base noise attenuation techniques on expected General Plan traffic volumes to ensure land use compatibility and General Plan consistency.

Goal EC-2 - Vibration

Minimize vibration impacts on people, residences, and business operations.

Policies - Vibration

- EC-2.1 Near light and heavy rail lines or other sources of ground-borne vibration, minimize vibration impacts on people, residences, and businesses through the use of setbacks and/or structural design features that reduce vibration to levels at or below the guidelines of the Federal Transit Administration. Require new development within 100 feet of rail lines to demonstrate prior to project approval that vibration experienced by residents and vibration sensitive uses would not exceed these guidelines.
- EC-2.2 Require new sources of ground-borne vibration, such as transit along fixed rail systems or the operation of impulsive equipment, to minimize vibration impacts on existing sensitive land uses to levels at or below the guidelines of the Federal Transit Administration.
- EC-2.3 Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Seismic Hazards

Goal EC-3 – Seismic Hazards

Minimize the risk of injury, loss of life, property damage, and community disruption from seismic shaking, fault rupture, ground failure (liquefaction and lateral spreading), earthquake-induced landslides, and other earthquake-induced ground deformation.

Policies – Seismic Hazards

- EC-3.1 All new or remodeled habitable structures shall be designed in accordance with the most recent California Building Code and California Fire Code as amended locally and adopted by the City of San José, including provisions regarding lateral forces.

- EC-3.2 Within seismic hazard zones identified under the Alquist-Priolo Fault Zoning Act, California Seismic Hazards Mapping Act and/or by the City of San José, geotechnical and geological investigations will be completed and development proposals approved only when the severity of seismic hazards have been evaluated and appropriate mitigation measures are provided as reviewed and approved by the City of San José Geologist. State guidelines for evaluating and mitigating seismic hazards and the City-adopted California Building Code will be followed.
- EC-3.3 The City of San José Building Official shall require conformance with state law regarding seismically vulnerable unreinforced masonry structures within the City.
- EC-3.4 The City of San José will maintain up-to-date seismic hazard maps with assistance from the California Geological Survey (or other state agencies) under the Alquist-Priolo Earthquake Fault Zoning Act and the California Seismic Hazards Mapping Act.
- EC-3.5 Locate, design and construct vital public utilities, communication infrastructure, and transportation facilities in a manner that maximizes risk reduction and functionality during and after an earthquake.
- EC-3.6 Development in close proximity to water retention levees or dams will be restricted unless it is demonstrated that such facilities will be stable and remain intact during and following an earthquake.
- EC-3.7 Encourage retrofitting of existing older buildings in the community to withstand seismic shaking consistent with adopted Building Codes, including provisions for historic buildings.

Actions – Seismic Hazards

- EC-3.8 Maintain and update Citywide seismic hazard maps for planning purposes on an on-going basis.
- EC-3.9 Revise and update provisions of the City of San José Geologic Hazard Ordinance, including geologic hazard zones, as new information becomes available from state and federal agencies on faults, earthquake-induced landsliding, liquefaction, and/or lateral spreading.
- EC-3.10 Require that a Certificate of Geologic Hazard Clearance be issued by the Director of Public Works prior to issuance of grading and building permits within defined geologic hazard zones related to seismic hazards.
- EC-3.11 Make information available to residents and businesses on ways to reduce seismic hazards and emergency preparedness for an earthquake in conjunction with regional, state and federal agencies such as the Association of Bay Area Governments (ABAG) and the United States Geological Survey (USGS).

Geologic and Soil Hazards

Goal EC-4 – Geologic and Soil Hazards

Minimize the risk of injury, loss of life, and property damage from soil and slope instability including landslides, differential settlement, and accelerated erosion.

Policies – Geologic and Soil Hazards

- EC-4.1 All new or remodeled habitable structures shall be designed and built in accordance with the most recent California Building Code and municipal code requirements as amended and adopted by the City of San José, including provisions for expansive soil, and grading and storm water controls.
- EC-4.2 Development in areas subject to soils and geologic hazards, including unengineered fill and weak soils and landslide-prone areas, will be approved only when the severity of hazards have been evaluated and if shown to be required, appropriate mitigation measures are provided. New development proposed within areas of geologic hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. The City of San José Geologist will review and approve geotechnical and geological investigation reports for projects within these areas as part of the project approval process.
- EC-4.3 Locate new public improvements and utilities outside of areas with identified soils and/or geologic hazards (e.g., deep seated landslides in the Special Geologic Hazard Study Area and former landfills) to avoid extraordinary maintenance and operating expenses. Where the location of public improvements and utilities in such areas cannot be avoided, effective mitigation measures will be implemented.
- EC-4.4 All new development shall conform to the City of San José's Geologic Hazard Ordinance.
- EC-4.5 Ensure that any development activity that requires grading does not impact adjacent properties, local creeks and storm drainage systems by designing and building the site to drain properly and minimize erosion. An Erosion Control Plan is required for all private development projects that have a soil disturbance of one acre or more, are adjacent to a creek/river, and/or are located in hillside areas. Erosion Control Plans are also required for any grading occurring between October 15 and April 15.
- EC-4.6 Development proposed in areas with soils containing naturally occurring asbestos (i.e., serpentinite) that would require ground disturbance and/or development of new residential or other sensitive uses, will be evaluated for risks to people from airborne asbestos particles during construction and post-construction periods. Hazards shall be assessed, at minimum, using guidelines and regulations of the Bay Area Air Quality Management District and the California Air Resources Board.

- EC-4.7 Consistent with the San José Geologic Hazard Ordinance, prepare geotechnical and geological investigation reports for projects in areas of known concern to address the implications of irrigated landscaping to slope stability and to determine if hazards can be adequately mitigated.

Actions – Geologic and Soil Hazards

- EC-4.8 Maintain and update Citywide geologic hazard maps for planning purposes.
- EC-4.9 Revise and update provisions of the City of San José Geologic Hazard Ordinance, including geologic hazard zones, as new information becomes available from state and federal agencies on landsliding potential and other geologic hazards.
- EC-4.10 Require a Certificate of Geologic Hazard Clearance to be issued by the Director of Public Works prior to issuance of grading and building permits within defined geologic hazard zones.
- EC-4.11 Require the preparation of geotechnical and geological investigation reports for projects within areas subject to soils and geologic hazards, and require review and implementation of mitigation measures as part of the project approval process.
- EC-4.12 Require review and approval of grading plans and erosion control plans (if applicable) prior to issuance of a grading permit by the Director of Public Works.
- EC-4.13 Use published maps and site specific geotechnical reports to identify possible areas of naturally occurring asbestos within the City of San José's Urban Growth Boundary for use in evaluating proposed development.

Flooding Hazards

San José and Santa Clara Valley have a history of flooding which has resulted in loss of life and property. In San José, the most serious flooding in recent history has occurred in the Alviso and North San José areas. These areas are subject to tidal flooding, the prevention or control of which would require significant resources.

Information on areas that are subject to flood hazards in the City is based on several sources. Flood Insurance Rate Maps (FIRM) have been prepared in conjunction with the Federal Flood Insurance Program showing areas projected to be flooded to a depth of one foot or more in the event of a "1%" or "100-year" flood occurrence. Information on areas subject to the "0.5%" or "200-year" flood are provided by FEMA and the California Department of Water Resources (DWR). The California Emergency Management Agency (Cal EMA) also provides information on areas subject to inundation due to dam failure.

The Santa Clara Valley Water District has the primary responsibility for flood protection through the construction, operation and maintenance of flood protection capital projects. Meanwhile, the City of San José has jurisdiction over and responsibility for development and floodplain management such that development is protected from flooding and development does not induce flooding on other properties within the City's Urban Service Area. Therefore, City policies

and land use decisions directly affect the design of channel modifications required as a part of a development. In particular, San Jose's regulation of development is a vehicle for requiring the dedication of waterways to the City or the Water District, preservation of floodplains and in some extreme cases, the construction of flood protection improvements.

Goal EC-5 – Flooding Hazards

Protect the community from flooding and inundation and preserve the natural attributes of local floodplains and floodways.

Policies – Flooding Hazards

- EC-5.1 The City shall require evaluation of flood hazards prior to approval of development projects within a Federal Emergency Management Agency (FEMA) designated floodplain. Review new development and substantial improvements to existing structures to ensure it is designed to provide protection from flooding with a one percent annual chance of occurrence, commonly referred to as the "100-year" flood or whatever designated benchmark FEMA may adopt in the future. New development should also provide protection for less frequent flood events when required by the State.
- EC-5.2 Allow development only when adequate mitigation measures are incorporated into the project design to prevent or minimize siltation of streams, flood protection ponds, and reservoirs.
- EC-5.3 Preserve designated floodway areas for non-urban uses.
- EC-5.4 Develop flood control facilities in cooperation with the Santa Clara Valley Water District to protect areas from the occurrence of the "1%" or "100-year" flood or less frequent flood events when required by the State.
- EC-5.5 Prepare and periodically update appropriate emergency plans for the safe evacuation of occupants of areas subject to possible inundation from dam and levee failure and natural flooding. Include maps with pre-established evacuation routes in dam failure plans.
- EC-5.6 Support State and Federal legislation which provides funding for the construction of flood protection improvements in urbanized areas.
- EC-5.7 Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.
- EC-5.8 Cooperate with the Santa Clara Valley Water District to develop and maintain additional flood protection retention facilities in areas where they are needed or where the design capacity of existing retention facilities cannot be restored.

- EC-5.9 Work with local, regional, state and federal agencies to ensure new and existing levees provide adequate flood protection and actively partner with the Santa Clara Valley Water District and other levee owners with respect to National Flood Insurance Program (NFIP) levee recertification.
- EC-5.10 Encourage the preservation and restoration of urban creeks and rivers to maintain existing floodplain storage. When in-channel work is proposed, engineering techniques which include the use of plant materials (bio-engineering) are encouraged.
- EC-5.11 Reduce the amount of impervious surfaces as a part of redevelopment and roadway improvements through the selection of materials, site planning, and street design where possible.
- EC-5.12 Locate critical or public facilities (such as the Water Pollution Control Plant, local hospitals, police and fire service facilities, and schools) above the 500-year floodplain or protect such facilities up to the magnitude 500-year flood. Construction standards based on FEMA guidelines may include freeboard, elevation above the 500-year floodplain and elevated access ramps.
- EC-5.13 As a part of the City's policies for addressing the effects of climate change and projected water level rise in San Francisco Bay, it requires evaluation of projected inundation for development projects near San Francisco Bay or at flooding risk from local waterways which discharge to San Francisco Bay. For projects affected by increased water levels in San Francisco Bay, the City requires incorporation of mitigation measures prior to approval of development projects. Mitigation measures incorporated into project design or project location shall prevent exposure to substantial flooding hazards from increased water levels in San Francisco Bay during the anticipated useful lifetime of structures.

Actions – Flooding Hazards

- EC-5.14 Implement the requirements of FEMA relating to construction in Special Flood Hazards Areas as illustrated on Flood Insurance Rate Maps. Periodically update the City's Flood Hazard Regulations to implement FEMA requirements.
- EC-5.15 San Jose will participate in the National Flood Insurance Program (NFIP) Community Rating System (CRS). The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed minimum NFIP requirements. Flood insurance premium rates for property owners within the city may be discounted to reflect the reduced flood risk resulting from community actions meeting the three goals of the CRS, which are to reduce flood damage to insurable property; strengthen and support the insurance aspects of the NFIP; and encourage a comprehensive approach to floodplain management.
- EC-5.16 Implement the Post-Construction Urban Runoff Management requirements of the City's Municipal NPDES Permit to reduce urban runoff from project sites.

- EC-5.17 Implement the Hydromodification Management requirements of the City's Municipal NPDES Permit to manage runoff flow and volume from project sites.
- EC-5.18 Maintain City storm drainage infrastructure in a manner that reduces flood hazards. As the storm drainage system is extended or modified, provide capacity to adequately convey the 10-year storm event.
- EC-5.19 Develop and maintain a Storm Drainage Master plan and work with other agencies to develop broader Watershed Management Plans to model the City's hydrology.
- EC-5.20 Monitor information from regional, state, and federal agencies on water level rises in San Francisco Bay on an on-going basis. Use this information to determine if additional adaptive management actions are needed and implement those actions to address flooding hazards from increasing sea levels for existing or new development and infrastructure.

Hazardous Materials

Goal EC-6 – Hazardous Materials

Protect the community from the risks inherent in the transport, distribution, use, storage, and disposal of hazardous materials.

Policies – Hazardous Materials

- EC-6.1 The City requires and shall continue to require all users and producers of hazardous materials and wastes to clearly identify and inventory the hazardous materials that they store, use or transport in conformance with local, state and federal laws, regulations and guidelines.
- EC-6.2 The City requires proper storage and use of hazardous materials and wastes to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal by businesses and residences. The City requires proper disposal of hazardous materials and wastes at licensed facilities.
- EC-6.3 San Jose shall continue to provide information to the public on the proper disposal of products by households and small businesses with practical pollution prevention options for the use, recycling, and disposal of products containing hazardous substances under City and County of Santa Clara programs for Household Hazardous Waste Disposal.
- EC-6.4 All proposals for new or expanded facilities that handle hazardous materials that could impact sensitive uses off-site will be required to include adequate mitigation to reduce identified hazardous materials impacts to less than significant levels.

- EC-6.5 Transportation routes to and from hazardous waste facilities shall be designated by the City as part of the permitting process in order to minimize adverse impacts on surrounding land uses and to minimize travel distances along residential and other non-industrial frontages.
- EC-6.6 Environmental review for all proposals for new residential, park and recreation, school, day care, hospital, church or other uses that would place a sensitive population in close proximity to sites on which hazardous materials are or are likely to be located must address the likelihood of an accidental release, the risks posed to human health and for sensitive populations, and mitigation measures, if needed, to protect human health.
- EC-6.7 Land uses and development that use hazardous materials that could impact existing residences, schools, day care facilities, community or recreation centers, senior residences, or other sensitive receptors if accidentally released shall not be approved without the incorporation of adequate mitigation or separation buffers between uses.

Actions – Hazardous Materials

- EC-6.8 The City will use information on file with the County of Santa Clara Department of Environmental Health under the California Accidental Release Prevention (CalARP) Program as part of accepted Risk Management Plans to determine whether new residential, recreational, school, day care, church, hospital, seniors or medical facility developments could be exposed to substantial hazards from accidental release of airborne toxic materials from CalARP facilities.
- EC-6.9 Adopt City guidelines for assessing possible land use compatibility and safety impacts associated with the location of sensitive uses near businesses or institutional facilities that use or store substantial quantities of hazardous materials by June 2011. The City will only approve new development with sensitive populations near sites containing hazardous materials such as toxic gases when feasible mitigation is included in the projects.
- EC-6.10 The City shall continue to identify source reduction and recycling as alternatives to hazardous materials land disposal whenever feasible.
- EC-6.11 Continue to promote the provision of used oil recycling and/or hazardous waste recycling facilities and drop-off locations for residents.
- EC-6.12 Regulate new development on or in proximity to high pressure natural gas pipelines to promote public safety and reduce risks from land use incompatibility.

Environmental Contamination

Goal EC-7 – Environmental Contamination

Protect the community and environment from exposure to hazardous soil, soil vapor, groundwater, and indoor air contamination and hazardous building materials in existing and proposed structures and developments and on public properties, such as parks and trails.

Policies – Environmental Contamination

- EC-7.1 For development and redevelopment projects, require evaluation of the proposed site's historical and present uses to determine if any potential environmental conditions exist that could adversely impact the community or environment.
- EC-7.2 Identification of existing soil, soil vapor, groundwater and indoor air contamination and mitigation for identified human health and environmental hazards to future users shall be provided as part of the environmental review process for all development and redevelopment projects. Mitigation measures for soil, soil vapor and groundwater contamination shall be designed to avoid adverse human health or environmental risk, in conformance with regional, state and federal laws, regulations, guidelines and standards.
- EC-7.3 Where a property is located in near proximity of known groundwater contamination with volatile organic compounds or within 1,000 feet of an active or inactive landfill, the potential for indoor air intrusion of hazardous compounds shall be evaluated and mitigated to the satisfaction of the City's Environmental Compliance Officer and appropriate regional, state and federal agencies prior to approval of a development or redevelopment project.
- EC-7.4 On redevelopment sites, the presence of hazardous building materials shall be determined during the environmental review process or prior to project approval. Mitigation and remediation of hazardous building materials, such as lead-paint and asbestos-containing materials, shall be implemented in accordance with state and federal laws and regulations.
- EC-7.5 On development and redevelopment sites, all sources of imported fill shall have adequate documentation that it is clean and free of contamination and/or acceptable for the proposed land use considering appropriate environmental screening levels for contaminants. Disposal of groundwater from excavations on construction sites shall comply with local, regional, and state requirements.
- EC-7.6 The City will encourage use of green building practices to reduce exposure to volatile or other hazardous materials in new construction materials.

- EC-7.7 Any development or redevelopment site that is within 1,000 feet of a known, suspected, or likely geographic ultramafic rock unit (as identified in maps developed by the Department of Conservation – Division of Mines and Geology) or any other known or suspected locations of serpentine or naturally occurring asbestos, shall determine if naturally occurring asbestos exists and, if so, comply with the Bay Area Air Quality Management District’s Asbestos Air Toxic Control Measure requirements.

Actions – Environmental Contamination

- EC-7.8 Where an environmental review process identifies the presence of hazardous materials on a proposed development site, the City will ensure that feasible mitigation measures that will satisfactorily reduce impacts to human health and safety and to the environment are required of or incorporated into the projects. This applies to hazardous materials found in the soil, groundwater, soil vapor, or in existing structures.
- EC-7.9 Ensure Coordination with the County of Santa Clara Department of Environmental Health, Regional Water Quality Control Board, Department of Toxic Substances Control or other applicable regulatory agencies, as appropriate, on projects with contaminated soil and/or groundwater or where historical or active regulatory oversight exists.
- EC-7.10 Require review and approval of grading, erosion control and dust control plans prior to issuance of a grading permit by the Director of Public Works on sites with known soil contamination. Construction operations shall be conducted to limit the creation and dispersion of dust and sediment runoff.
- EC-7.11 Require sampling for residual agricultural chemicals, based on the history of land use, on sites to be used for any new development or redevelopment to account for worker and community safety during construction. Mitigation to meet appropriate end use such as residential or commercial/industrial shall be provided.

Wildland and Urban Fire Hazards

Goal EC-8 – Wildland and Urban Fire Hazards

Protect lives and property from risks associated with fire-related emergencies at the urban wildland interface.

Policies – Wildland and Urban Fire Hazards

- EC-8.1 Minimize development in very high fire hazard zone areas. Plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
- EC-8.2 Avoid actions which increase fire risk, such as increasing public access roads in very high fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.

- EC-8.3 For development proposed on parcels located within a very high fire hazard severity zone or wildland-urban interface area, continue to implement requirements for building materials and assemblies to provide a reasonable level of exterior wildfire exposure protection in accordance with City-adopted requirements in the California Building Code.
- EC-8.4 Require use of defensible space vegetation management best practices to protect structures at and near the urban/wildland interface.

Actions – Wildland and Urban Fire Hazards

- EC-8.5 Periodically assist with revisions and updates of appropriate sections of the County-wide Area Plan that address emergency response to fires at the urban/wildland interface.
- EC-8.6 Continue to provide information to the public on fire hazard reduction in cooperation with local, regional, and state agencies, including the County of Santa Clara FireSafe Council.

Infrastructure

The construction and maintenance of infrastructure is necessary to support existing and planned land uses and to achieve Environmental Leadership, Innovative Economy, Healthy Neighborhoods and other City goals. The City is committed to providing adequate infrastructure to support the day-to-day needs of its residents and businesses. Water, wastewater, storm, solid waste, recycling and other infrastructure systems will be expanded concurrent with new development, employment and population growth. As most new growth will occur within the already urbanized areas, new infrastructure projects will generally focus on expansions and enhancements to existing infrastructure; supporting intensification of the Downtown, North San José and other employment areas; transit areas including the urban Corridors and Villages; and other planned Growth Areas.

Provision of Infrastructure

Goal IN-1 – General Provision of Infrastructure

Provide and maintain adequate water, wastewater, stormwater, water treatment, solid waste and recycling, and recycled water infrastructure to support the needs of the City's residents and businesses.

Policies – General Provision of Infrastructure

- IN-1.1 Continue to provide and maintain adequate water, wastewater, and stormwater services to areas in and currently receiving these services from the City.
- IN-1.2 Provide and maintain adequate water, wastewater, and stormwater services to areas in the city that do not currently receive these City services upon funding and construction of the infrastructure necessary to provide them.

- IN-1.3 Continue to provide sustainable utility services and infrastructure in a cost-efficient manner consistent with General Plan goals and policies related to Fiscal Sustainability.
- IN-1.4 Give priority to the development of infrastructure within identified Growth Areas to support the amount, type and location of new development planned through the Land Use/Transportation Diagram and other General Plan goals and policies.
- IN-1.5 Require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.
- IN-1.6 Ensure that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs to avoid the need for future upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage over-sizing of infrastructure which could contribute to growth beyond what was anticipated in this General Plan.
- IN-1.7 Implement financing strategies, including assessment of fees and establishment of financing mechanisms, to construct and maintain needed infrastructure that maintain established service levels and mitigate development impacts to these systems (e.g., pay capital costs associated with existing infrastructure that has inadequate capacity to serve new development and contribute toward operations and maintenance costs for upgraded infrastructure facilities).
- IN-1.8 Support the development of joint-use water, stormwater, and other utility facilities as appropriate in conjunction with schools, parks, golf courses, and other suitable uses to achieve economy and efficiency in the provision of services and facilities.
- IN-1.9 Design new public and private utility facilities to be safe, aesthetically pleasing, compatible with adjacent uses and consistent with the General Plan goals and policies for environmental leadership, an innovative economy and quality neighborhoods.
- IN-1.10 Require undergrounding of all new publicly owned utility lines. Encourage undergrounding of all privately owned utility lines in new developments. Work with electricity and telecommunications providers to underground existing overhead lines.
- IN-1.11 Locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.

Action – General Provision of Infrastructure

- IN-1.12 Review existing adjacent and overlapping special districts and consider whether annexation, detachment, consolidation, and/or retention of them for stormwater, wastewater, and solid waste is needed to increase their efficiency and quality of service and delivery.

Infrastructure Management

Goal IN-2 – Infrastructure Management

Manage City resources efficiently in order to maintain existing infrastructure and facilities and avoid unnecessary replacement costs.

Policies – Infrastructure Management

- IN-2.1 Utilize the City's Infrastructure Management System Program to identify the most efficient use of available resources to maintain its infrastructure and minimize the need to replace it.
- IN-2.2 Explore new methods to supplement the City's existing resources devoted to the operation and maintenance of its infrastructure and facilities.
- IN-2.3 Upgrade City infrastructure service levels, whenever feasible, or to respond to and align with local, State and Federal regulatory requirements.

Water Supply, Sanitary Sewer and Storm Drainage

Goal IN-3 – Water Supply, Sanitary Sewer and Storm Drainage

Provide water supply, sanitary sewer, and storm drainage infrastructure facilities to meet future growth planned within the City, to assure high-quality service to existing and future residents, and to fulfill all applicable local, State and Federal regulatory requirements.

Policies – Water Supply, Sanitary Sewer and Storm Drainage

- IN-3.1 Achieve minimum level of services:
- For sanitary sewers, achieve a minimum level of service "D" or better as described in the Sanitary Sewer Level of Service Policy and determined based on the guidelines provided in the Sewer Capacity Impact Analysis (SCIA) Guidelines.
 - For storm drainage, to minimize flooding on public streets and to minimize the potential for property damage from stormwater, implement a 10-year return storm design standard throughout the City, and in compliance with all local, State and Federal regulatory requirements.
- IN-3.2 Work with water retailers to provide water supply facilities to meet future growth within the City's Urban Service Area and assure a high-quality and reliable supply of water to existing and future residents.

- IN-3.3 Meet the water supply, sanitary sewer and storm drainage level of service objectives through an orderly process of ensuring that, before development occurs, there is adequate capacity. Coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects.
- IN-3.4 Maintain and implement the City's Sanitary Sewer Level of Service Policy and Sewer Capacity Impact Analysis (SCIA) Guidelines to:
- Prevent sanitary sewer overflows (SSOs) due to inadequate capacity so as to ensure that the City complies with all applicable requirements of the Federal Clean Water Act and State Water Board's General Waste Discharge Requirements for Sanitary Sewer Systems and National Pollutant Discharge Elimination System permit. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.
 - Maintain reasonable excess capacity in order to protect sewers from increased rate of hydrogen sulfide corrosion and minimize odor and potential maintenance problems.
 - Ensure adequate funding and timely completion of the most critically needed sewer capacity projects.
 - Promote clear guidance, consistency and predictability to developers regarding the necessary sewer improvements to support development within the City.
- IN-3.5 Require development which will have the potential to reduce downstream LOS to lower than "D", or development which would be served by downstream lines already operating at a LOS lower than "D", to provide mitigation measures to improve the LOS to "D" or better, either acting independently or jointly with other developments in the same area or in coordination with the City's Sanitary Sewer Capital Improvement Program.
- IN-3.6 Consistent with the Goals, Policies and Implementation Actions for Water Supply, expand San Jose's infrastructure for the delivery of recycled water.
- IN-3.7 Design new projects to minimize potential damage due to storm waters and flooding to the site and other properties.
- IN-3.8 In designing improvements to creeks and rivers, protect adjacent properties from flooding consistent with the best available information and standards from the Federal Emergency Management Agency (FEMA) and the California Department of Water Resources (DWR). Incorporate restoration of natural habitat into improvements where feasible.
- IN-3.9 Require developers to prepare drainage plans for proposed developments that define needed drainage improvements per City standards.

- IN-3.10 Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit.
- IN-3.11 The "modified floodplain design" is the preferred design for future flood protection facilities. Use the "widen-one-bank" and "trapezoidal channel" designs only when funding or right-of-way limitations make the use of the modified flood plain design impractical. For future development, consider factors such as flooding risks, proximity to waterways, and the potential for implementing flood protection measures.
- IN-3.12 Coordinate efforts with other agencies in the development of regional stormwater facilities.
- IN-3.13 Encourage the use of flood protection guidelines in development, such as those recommended by the SCVWD, FEMA, and DWR.

Actions – Water Supply, Sanitary Sewer and Storm Drainage

- IN-3.14 Maintain and implement the Sanitary Sewer Master Plan Program to determine sewer system capacity needs using a computerized hydraulic model of San Jose's sewer system, supported by sewer flow monitoring at strategic locations within the system.
- IN-3.15 Develop a sewer capacity improvement program to prioritize and construct improvement projects to address the capacity needs identified in the Sewer Master Plan Program.
- IN-3.16 Develop a Storm Drainage Infrastructure Master Plan to
- Identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding.
 - Ensure that public facilities and infrastructure are designed pursuant to approved State, regional and local regulatory requirements.
 - Ensure that adequate land area and any other elements are provided for facilities subject to incremental sizing (e.g., detention basins and pump stations).
 - Identify opportunities to meet water quality protection needs in a cost-effective manner.
- IN-3.17 Develop and implement a Green Streets plan consistent with NPDES permit requirements.

Wastewater Treatment and Water Reclamation

Goal IN-4 – Wastewater Treatment and Water Reclamation

Provide, maintain and operate wastewater treatment and water reclamation facilities to support City development goals and planned future growth through the implementation of innovative technologies and operational practices and to fulfill all applicable local, State and federal regulatory requirements.

Policies – Wastewater Treatment and Water Reclamation

- IN-4.1 Monitor and regulate growth so that the cumulative wastewater treatment demand of all development can be accommodated by San José's share of the treatment capacity at the San José/Santa Clara Water Pollution Control Plant.
- IN-4.2 Maintain adequate operational capacity for wastewater treatment and water reclamation facilities to accommodate the City's economic and population growth.
- IN-4.3 Adopt and implement new technologies for the operation of wastewater treatment and water reclamation facilities to achieve greater safety, energy efficiency and environmental benefit.
- IN-4.4 Maintain and operate wastewater treatment and water reclamation facilities in compliance with all applicable local, State and federal clean water, clean air, and health and safety regulatory requirements.
- IN-4.5 Develop projects, policies and programs to convert wastewater treatment streams into energy so that the wastewater treatment facilities can operate as fully energy self-efficient.
- IN-4.6 Continue to encourage water conservation and other programs which result in reduced demand for wastewater treatment capacity.
- IN-4.7 Support programs to maximize the beneficial use of wastewater treatment and water reclamation byproducts, which may include water, bio-solids and nutrients.

Action – Wastewater Treatment and Water Reclamation

- IN-4.8 Prepare, maintain and implement a Master Plan(s) for the ongoing capital improvement, maintenance, and operation of the wastewater treatment and water reclamation facilities.

Solid Waste – Materials Recovery / Landfill

Goal IN-5 – Solid Waste-Materials Recovery / Landfill

Develop and maintain materials recovery and landfill facilities to meet community needs, advance the City's Zero Waste goals and to comply with applicable regulatory requirements.

Polices – Solid Waste-Materials Recovery / Landfill

- IN-5.1 Monitor the continued availability of long-term collection, transfer, recycling and disposal capacity to ensure adequate solid waste capacity. Periodically assess infrastructure needs to support the City's waste diversion goals. Work with private MRF and Landfill operators to provide facility capacity to implement new City programs to expand recycling, composting and other waste processing.

- IN-5.2 Explore new methods to supplement the City's existing resources devoted to the operation and maintenance of its solid waste and recycling infrastructure and facilities.
- IN-5.3 Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the City's Zero Waste goals.
- IN-5.4 Support the expansion of infrastructure to provide increased capacity for Materials Recovery Facilities (MRF)/transfer, composting, and Construction and Demolition materials processing (C&D) at privately operated facilities and on lands under City control to provide increased long-term flexibility and certainty.
- IN-5.5 Preserve industrial lands, consistent with General Plan Land Use and Fiscal Sustainability policies, to support the City's future waste management infrastructure needs.
- IN-5.6 Promote secondary uses at MRF and landfill sites, including economically beneficial recovery of solid waste resources, waste to energy conversion, organic materials processing, and development of resource recovery parks.
- IN-5.7 Achieve a high level of public awareness of solid waste issues and alternatives to use of landfills.
- IN-5.8 Promote the implementation of new technologies and practices to provide operational efficiencies, to reduce potential environmental impacts and to minimize potential land use incompatibility.
- IN-5.9 Locate and operate solid waste disposal facilities in a manner which protects environmental resources and is compatible with existing and planned surrounding land uses.
- IN-5.10 Plan, maintain and operate MRF and landfill facilities in a manner that mitigates potential negative environmental and land use impacts, including surface water or ground water contamination; issues related to birds, insects, rodents or other wildlife; increased traffic and traffic hazards; noise and odor problems; pollution and potential littering of traffic routes; and windborne and waterborne litter.
- IN-5.11 Establish new solid waste landfills only on lands designated with the Candidate Solid Waste Landfill Site overlay ("CSW").
- IN-5.12 Design and control access routes to solid waste landfill sites in non-urban areas so as to avoid encouraging urban development on adjacent or nearby properties.

- IN-5.13 Designate no new candidate landfill sites until the need for additional landfill capacity has been established. Source reduction, recycling/composting alternatives, and waste conversion should be taken into account when evaluating the need for a landfill.
- IN-5.14 No new candidate landfill sites should be designated in this General Plan until a Countywide site review has been conducted according to criteria established through the County Integrated Management Plan process.
- IN-5.15 The preferred method for increasing the City's landfill capacity is to expand the capacity of existing landfill sites and monitor the continued availability of recycling, resource recovery and composting capacity to ensure adequate long term capacity.
- IN-5.16 Plan for the eventual phased restoration of the portions of landfill facilities located outside of the Urban Growth Boundary, where waste processing and composting operations are not maintained, to recreational or open space uses, including revegetation with native plant species.
- IN-5.17 Use landscape and design measures to screen solid waste landfill sites from public view when they are not already screened by topography and naturally occurring vegetation, and when such measures are practicable considering all other environmental goals of the City.
- IN-5.18 Methane gas may be recovered from a closed solid waste landfill irrespective of the land use designation of that site.

Telecommunications

Goal IN-6 – Telecommunications

Support the provision of state-of-the-art telecommunication services for households, businesses, institutions, and public agencies throughout the city to foster an innovative economy, support environmental leadership, meet the needs of quality neighborhoods and advance other General Plan goals.

Policies – Telecommunications

- IN-6.1 Work with service providers to ensure access to and availability of a wide range of state-of-the-art telecommunication systems and services for households, businesses, institutions, and public agencies throughout the city.
- IN-6.2 Work with utility companies to retrofit areas that are not served by current telecommunication technologies and provide strategic long-range planning of telecommunication facilities for newly developing areas, as feasible.
- IN-6.3 Encourage local industries, higher educational institutions, and other entities to support innovation in the design and implementation of state-of-the-art telecommunication technologies and facilities.

- IN-6.4 Encourage compatible collocation of telecommunication facilities. Work with utility companies to provide opportunities for siting telecommunications facilities on City-owned property and public right-of-ways.

Action – Telecommunications

- IN-6.5 Establish requirements for the installation of state-of-the-art internal telecommunications technologies in new large-scale planned communities and office and commercial developments (e.g., wiring of all new housing and businesses).